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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,344

11/08/2005

Pierre Falson

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BUCHANAN, INGERSOLL & ROONEY PC
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EXAMINER

BOESEN, AGNIESZKA

ART UNIT

PAPER NUMBER

1648

NOTIFICATION DATE

DELIVERY MODE

04/08/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Notice of Allowability	Application No.	Applicant(s)	
	10/528,344	FALSON ET AL.	
	Examiner	Art Unit	
	AGNIESZKA BOESEN	1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to January 5, 2009.
2. ☒ The allowed claim(s) is/are 10-12 and 16-25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|--|

/Agnieszka Boesen/
Examiner, Art Unit 1648

/Larry R. Helms/
Supervisory Patent Examiner, Art Unit 1643

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Lisa Stahl on March 30, 2009.

The application has been amended as follows:

IN THE CLAIMS:

Amend the allowed claims 12, 19 and 23-25 as follows:

10. An expression system comprising a DNA sequence, wherein said DNA sequence encodes a fusion protein comprising a sequence selected from the group consisting of SEQ ID NOS: 46-51.

11. An expression system comprising a DNA sequence encoding a fusion protein, wherein said DNA sequence is selected from the group consisting of SEQ ID NOS: 34-39.

12. A bacterial expression vector comprising:
(a) a DNA sequence, wherein said DNA sequence encodes a fusion protein comprising a sequence selected from the group consisting of SEQ ID NOS: 46-51, or
(b) a DNA sequence encoding a fusion protein, wherein said DNA sequence is selected from the group consisting of SEQ ID NOS: 34-39,
cloned into a plasmid.

16. A bacterial expression vector comprising a sequence selected from the group consisting of SEQ ID NOS: 40-45.

17. A prokaryotic cell transformed with the bacterial expression vector of Claim 12.
18. The prokaryotic cell of Claim 17, wherein the prokaryotic cell is an *E. coli* cell.
19. A method for producing a toxic membrane protein or a transmembrane domain of the toxic membrane protein by genetic recombination, comprising the following steps:
 - transforming a host cell with an expression vector,
 - culturing the transformed host cell under culture conditions such that it produces a fusion protein comprising the dipeptide Asp-Pro followed by the peptide sequence of the toxic membrane protein or the transmembrane domain of the toxic membrane protein from the expression vector,
 - and
 - isolating the fusion protein;
 - wherein said expression vector
 - (a) comprises a DNA sequence, wherein said DNA sequence encodes a fusion protein comprising a sequence selected from the group consisting of SEQ ID NOS: 46-51;
 - (b) comprises a DNA sequence encoding a fusion protein, wherein said DNA sequence is selected from the group consisting of SEQ ID NOS: 34-39; or
 - (c) comprises a DNA sequence selected from the group consisting of SEQ ID NOS: 40-45.
20. The method of Claim 19, wherein the method further comprises the following step:
 - cleaving the fusion protein so as to recover the toxic membrane protein or the transmembrane domain of the toxic membrane protein.
21. The method of Claim 20, wherein the step of cleaving the fusion protein so as to recover the toxic membrane protein or the transmembrane domain of the toxic membrane protein is carried out by reacting the fusion protein with formic acid.
22. The method of Claim 19, wherein the host cell is an *E. coli* cell.

Art Unit: 1648

23. The method of Claim 19, wherein the expression vector comprises a DNA sequence, wherein said DNA sequence encodes a fusion protein comprising a sequence selected from the group consisting of SEQ ID NOS: 46-51.

24. The method of Claim 19, wherein the expression vector comprises a DNA sequence encoding a fusion protein, wherein said DNA sequence is selected from the group consisting of SEQ ID NOS: 34-39.

25. The method of Claim 19, wherein the expression vector comprises a DNA sequence selected from the group consisting of SEQ ID NOS: 40-45.

Examiners comment

Claims 12, 19, and 23-25 were amended to correct multiple dependencies.

Conclusion

Claims 10-12 and 16-25 are allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agnieszka Boesen whose telephone number is 571-272-8035.

The examiner can normally be reached on Monday – Friday from 9:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1648

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Agnieszka Boesen/
Examiner, Art Unit 1648

/Larry R. Helms/
Supervisory Patent Examiner, Art Unit 1643